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DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2021–0059]

Parts and Accessories Necessary for Safe Operation; Application for an Exemption from Waste Management Inc.

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of final disposition; grant of exemption.

SUMMARY: The Federal Motor Carrier Safety Administration (FMCSA) announces its decision to grant the limited 5-year exemption requested by Waste Management Inc. (Waste Management) to allow all of its operating companies, which currently number 106, to replace the high-mounted brake lights on their owned and operated fleets of heavy-duty refuse and support trucks with red or amber brake-activated pulsating lamps positioned in the upper center position, or in an upper dual outboard position, in addition to the steady burning brake lamps required by the Federal Motor Carrier Safety Regulations (FMCSRs). The Agency has determined that granting the exemption would likely achieve a level of safety equivalent to or greater than the level of safety provided by the regulation.

DATES: This exemption is effective January 20, 2022 and ending January 20, 2027.

FOR FURTHER INFORMATION CONTACT: Mr. José R. Cestero, Vehicle and Roadside Operations Division, Office of Carrier, Driver, and Vehicle Safety, MC-PSV, (202) 366-5541, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

Docket: For access to the docket to read background documents or comments submitted to notice requesting public comments on the exemption application, go to www.regulations.gov at any time or visit Dockets Operations, Room W12-140 on the ground level of the West Building, 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and

5 p.m., ET, Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366-9317 or (202) 366-9826 before visiting Dockets Operations. The on-line Federal document management system is available 24 hours each day, 365 days each year. The docket number is listed at the beginning of this notice.

SUPPLEMENTARY INFORMATION:

Background

FMCSA has authority under 49 U.S.C. 31136(e) and 31315 to grant exemptions from certain parts of the FMCSRs. FMCSA must publish a notice of each exemption request in the **Federal Register** (49 CFR 381.315(a)). The Agency must provide the public an opportunity to inspect the information relevant to the application, including any safety analyses that have been conducted. The Agency must also provide an opportunity for public comment on the request.

The Agency reviews safety analyses and public comments submitted and determines whether granting the exemption would likely achieve a level of safety equivalent to, or greater than, the level that would be achieved by the current regulation (49 CFR 381.305). The decision of the Agency must be published in the **Federal Register** (49 CFR 381.315(b)) with the reasons for denying or granting the application and, if granted, the name of the person or class of persons receiving the exemption, and the regulatory provision from which the exemption is granted. The notice must also specify the effective period and explain the terms and conditions of the exemption. The exemption may be renewed (49 CFR 381.300(b)).

Waste Management's Application for Exemption

Section 393.25(e) of the FMCSRs requires all exterior lamps (both required lamps and any additional lamps) to be steady-burning, except turn signal lamps, hazard warning signal lamps, school bus warning lamps, amber warning lamps or flashing warning lamps on tow trucks and commercial motor vehicles (CMV) transporting oversized loads, and warning lamps on emergency and service vehicles authorized by State or local authorities.

Waste Management applied for an exemption from 49 CFR 393.25(e) to allow all of its operating companies, which currently number 106, to replace the rear high-mounted brake lights with red or amber brake-activated pulsating lamps positioned in the upper center position, or in an upper dual outboard position, in addition to the steady burning brake lamps required by the FMCSRs.

A copy of the application is included in the docket referenced at the beginning of this notice.

Waste Management contended that the addition of brake-activated pulsating lamps would improve safety and stated that research shows that pulsating brake lamps installed improve visibility and prevent rear end accidents. Waste Management noted that FMCSA has previously granted similar, but not identical, temporary exemptions to the National Tank Truck Carriers Inc. (NTTC), (85 FR 63643), Grote Industries, LLC. (Grote), (85 FR 78918). Inc. (Grote), and Groendyke Transport Inc. (Groendyke) (84 FR 17910).

Waste Management included in the application several studies conducted by the National Highway Traffic Safety Administration (NHTSA), another agency in the U.S. Department of Transportation, on the issues of rear-end crashes, distracted driving, and braking signals. Waste Management stated that the addition of brake-activated pulsating lamp(s) will not have an adverse impact on safety, and that adherence to the terms and conditions of the exemption would likely achieve a level of safety equivalent to or greater than the level of safety achieved without the exemption.

Comments

FMCSA published a notice of the application in the **Federal Register** on June 3, 2021 and asked for public comment (86 FR 29876). The Agency received comments from the Transportation Safety Equipment Institute (TSEI), the National Truck Equipment Association (NTEA), the Florida Highway Patrol-Bureau of Commercial Vehicle Enforcement (FHP), the Commercial Vehicle Safety Alliance (CVSA), the National Waste Recycling Association

(NWRA), and from 18 other stakeholders and individuals. Twenty of the 23 comments favored the exemption application.

NWRA and TSEI supported granting the application. CVSA supported the use of amber brake-activated warning lamps, but was opposed to the use of red brake-activated pulsating warning lamps. Florida Highway Patrol expressed concern regarding the use of red brake-activated pulsating warning lamps because traffic approaching from the rear might confuse the flashing red lights with law enforcement vehicles.

NWRA supports the Waste Management application, noting that the 2019 Bureau of Labor Statistics Census of Fatal Injuries classified 40 of the 70 fatal incidents for waste and remediation services as transportation incidents. NWRA also provided research data from a report[1] noting that flashing brake systems and flashing hazard systems reduced drivers' brake response times by 0.14-0.62 seconds, and 0.03-0.95 seconds respectively, while flashing amber lamps reduced drivers' brake response times by 0.11 seconds on average compared with red lamps. NWRA noted that the requested exemption should not only improve the safety for Waste Management's workers, but also improve the overall safety of the motoring public.

TSEI acknowledged the safety benefits of brake-activated warning lamps when used in conjunction with steady burning red brake lamps and identified its support of previous exemption requests for Groendyke, NTTC, and Grote. TSEI stated that it does not believe the Agency should grant the temporary exemption to Waste Management to allow brake-activated required lamps to pulsate without a thorough consideration of safety data and research with the aim of setting standards to ensure consistency across all vehicles equipped with such lamps.

NTEA expressed concern that some NTEA members are manufacturers and alterers of motor vehicles that receive requests from commercial motor vehicle fleets to install brake-

[1] https://journals.sagepub.com/doi/full/10.1155/2014/792670

activated pulsating warning lamps on certain new vehicles they construct or modify. As manufacturers of new motor vehicles, NTEA members are required to certify these vehicles to applicable NHTSA Federal Motor Vehicle Safety Standards (FMVSS). NTEA noted that FMCSA does not have the authority to exempt manufacturers of commercial motor vehicles from their obligation to certify compliance with affected FMVSS. NTEA noted that FMCSA temporary exemptions for brake-activated warning lamps are narrowly restricted to motor carriers making the exempted modification to their own vehicles.

CVSA stated that the Agency should allow motor carriers to equip commercial motor vehicles with amber brake-activated pulsating lights, but is opposed to red brake-activated pulsating lights. CVSA and FHP noted that pulsating red lights are typically associated with law enforcement or emergency vehicles. Allowing red pulsating lamps on the rear of commercial motor vehicles may negatively impact the driving public's recognition and response to emergency vehicles. Further, many States have laws prohibiting nonemergency vehicles from having pulsating red lights.

Eighteen stakeholders and individuals submitted comments in support of granting the exemption. These commenters believe that any technology that has been shown to reduce rear end crashes should be allowed and cited various benefits of brake-activated pulsating lamps, including (1) enhanced awareness that the vehicle is making a stop, especially at railroad crossings, and (2) increased visibility in severe weather conditions.

FMCSA Decision

The FMCSA has evaluated the Waste Management exemption application and the comments received. The Agency believes that granting the temporary exemption to allow its operating companies to replace the high-mounted brake lights on their owned and operated fleets of heavy-duty refuse and support trucks with red or amber brake-activated pulsating lamps positioned in the upper center position, or in an upper dual outboard position, in addition to the steady burning brake lamps required by the Federal Motor Carrier Safety Regulations

(FMCSRs), will likely provide a level of safety that is equivalent to, or greater than, the level of safety achieved without the exemption.

Rear-end crashes generally account for approximately 30 percent of all crashes. These types of crashes often result from a failure to respond (or delays in responding) to a stopped or decelerating lead vehicle. Data between 2010 and 2016 show that large trucks are consistently three times more likely than other vehicles to be struck in the rear in two-vehicle fatal crashes.[2,3]

Both FMCSA and NHTSA have conducted research regarding alternative rear signaling systems to address rear-end crashes. FMCSA has conducted research and development of an Enhanced Rear Signaling (ERS) system for CMVs.[4] The study noted that, while brake lights are activated only with the service brakes, and the visual warning is provided only during conditions when the lead vehicle is decelerating using its braking system, brake lights are not activated during other conditions when rear-end collisions can occur (e.g., when the CMV is (1) stopped along the roadway or in traffic, (2) traveling slower, or (3) decelerating using an engine retarder). Because of the limitations of the existing brake system described above, along with issues relating to visual distraction, the study examined ways for CMVs to detect rear-end crash threats and to provide drivers of following vehicles a supplemental visual warning – located on the lead vehicle, and in addition to the current brake lights – so following-vehicle drivers can quickly recognize impending collision threats.

During Phase I of this effort, researchers performed crash database analyses to determine causal factors of rear-end collisions and to identify potential countermeasures. Phase II continued through prototype development based on recommendations from Phase I. During Phase II field testing, potential benefits of using such countermeasures were realized. During

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[2] U.S. Department of Transportation, National Highway Traffic Safety Administration (2012), Traffic Safety Facts – 2010 Data; Large Trucks, Report No. DOT HS 811 628, Washington, DC (June 2012)
[3] U.S. Department of Transportation, National Highway Traffic Safety Administration (2018), Traffic Safety Facts – 2016 Data; Large Trucks, Report No. DOT HS 812 497, Washington, DC (May 2018)
[4] U.S. Department of Transportation, Federal Motor Carrier Safety Administration (2014), Expanded Research and Development of an Enhanced Rear Signaling System for Commercial Motor Vehicles, Report No. FMCSA-RRT-13-009, Washington, DC (April 2014)

Phase III, a multi-phased approach was executed to design, develop, and test multiple types of countermeasures on a controlled test track and on public highways. Phase III yielded positive results for a rear-warning prototype system comprising 12 light-emitting diode (LED) units that would flash at 5 Hz to provide a visual warning to the following-vehicle drivers indicating that, with continued closing rate and distance, a collision will occur with the lead vehicle. Finally, the prototype system was further developed and refined to include modification of the system into a unit designed for simple CMV installation, collision-warning activation refinements, and rear-lighting brightness adjustments for nighttime conditions. Formal closed test-track and real-world testing were then performed to determine the ERS system collision-warning activation performance.

While the efforts described above demonstrated a promising system for follow-on research, FMCSA ultimately decided not to pursue formal field operational testing of the prototype system because of concerns relating to (1) the cost to implement the ERS system as configured, and (2) fleets' willingness to invest in the technology, given the cost of the system. Nonetheless, the preliminary research showed that the ERS system performed well at detecting and signaling rear-end crash threats and drawing the gaze of following-vehicle drivers to the forward roadway which, if implemented, could potentially reduce the number and frequency of rear-end crashes into CMVs.

Separately, NHTSA has performed a series of research studies intended to develop and evaluate rear-signaling applications designed to reduce the frequency and severity of rear-end crashes via enhancements to rear-brake lighting by redirecting drivers' visual attention to the forward roadway (for cases involving a distracted driver), and/or increasing the saliency or meaningfulness of the brake signal (for inattentive drivers).[5,6]

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[5] U.S. Department of Transportation, National Highway Traffic Safety Administration (2009), Traffic Safety Facts – Vehicle Safety Research Notes; Assessing the Attention-Gettingness of Brake Signals: Evaluation of Optimized Candidate Enhanced Braking Signals; Report No. DOT HS 811 129, Washington, DC (May 2009)

[6] U.S. Department of Transportation, National Highway Traffic Safety Administration (2010), Traffic Safety Facts – Vehicle Safety Research Notes; Assessing the Attention-Getting Capability of Brake Signals: Evaluation of Candidate Enhanced Braking Signals and Features; Report No. DOT HS 811 330, Washington, DC (June 2010)

Initially, the study quantified the attention-getting capability and discomfort glare of a set of candidate rear brake lighting configurations, using driver judgments, as well as eye-drawing metrics. This study served to narrow the set of candidate lighting configurations to those that would most likely be carried forward for additional on-road study. Both look-up (eye-drawing) data and interview data supported the hypothesis that simultaneous flashing of all rear lighting combined with increased brightness would be effective in redirecting the driver's eyes to the lead vehicle when the driver is looking away with tasks that involve visual load.

Subsequently, the study quantified the attention-getting capability of a set of candidate rear brake lighting configurations, including proposed approaches from automotive companies. This study was conducted to provide data for use in a simulation model to assess the effectiveness and safety benefits of enhanced rear brake light countermeasures. Among other things, this research demonstrated that flashing all lights simultaneously or alternately flashing is a promising signal for use in enhanced brake light applications, even at levels of brightness within the current regulated limits. Specifically, the study concluded that substantial performance gains may be realized by increasing brake-lamp brightness levels under flashing configurations; however, increases beyond a certain brightness threshold will not return substantive performance gains.

Both FMCSA and NHTSA have conducted extensive research and development programs to examine alternative rear-signaling systems to reduce the incidence of rear-end crashes. However, while these efforts concluded that improvements could be realized through rear-lighting systems that flash, neither the FMCSRs nor the Federal Motor Vehicle Safety Standards (FMVSS) currently permit the use of pulsating, brake-activated lamps on the rear of CMVs.

With respect to the use of amber lights, NHTSA has conducted research on the effectiveness of rear turn signal color on the likelihood of being involved in a rear-end crash.[7] FMVSS No. 108 allows rear turn signals to be either red or amber in color. The study concluded that amber signals show a 5.3 percent effectiveness in reducing involvement in two-vehicle crashes where a lead vehicle is rear-struck in the act of turning left, turning right, merging into traffic, changing lanes, or entering/leaving a parking space. The advantage of amber, compared to red, rear turn signals was shown to be statistically significant.

FMCSA acknowledges the concern of NTEA that FMCSA has the authority to grant the temporary exemption only to motor carriers and not to commercial motor vehicle manufacturers or vehicle alterers. FMCSA has met with NHTSA to discuss research avenues that would support NHTSA updates to 49 CFR § 571.108 - Standard No. 108; Lamps, reflective devices, and associated equipment, such that the commercial motor vehicle manufacturers would be able to install brake activated warning light systems for which FMCSA has already granted temporary exemptions to motor carriers. FMCSA believes that the FMCSA and NHTSA research programs demonstrating the ability of alternative rear-signaling systems to reduce the frequency and severity of rear-end crashes, are sufficient to conclude that implementation of red or amber brake activated pulsating lamps is likely to provide a level of safety that is equivalent to, or greater than, the level of safety achieved without the exemption.

FMCSA acknowledges the concerns of FHP and CVSA that flashing, rotating, or pulsating red lamps are generally permitted only on emergency vehicles. FMCSA notes that police and other State-authorized emergency vehicles utilize high intensity, constantly flashing, rotating, or pulsating red lamps visible from all directions on the vehicle and that continuously operate when activated. The amber or red brake-activated pulsating lamps requested by Waste Management are visible only to the rear of their vehicles and are similar in lamp intensity and

[7] U.S. Department of Transportation, National Highway Traffic Safety Administration (2009), The Effectiveness of Amber Rear Turn Signals for Reducing Rear Impacts; Report No. DOT HS 811 115, Washington, DC (April 2009)

flash rate of the vehicle's standard rear hazard warning lamps system currently allowed by the regulations. FMCSA believes that the FMCSA and NHTSA research programs that demonstrated the ability of alternative rear signaling systems to reduce the frequency and severity of rear-end crashes are sufficient to conclude that the implementation of red or amber brake-activated pulsating lamps in the upper center position or in an upper dual outboard position on the rear of their vehicles, in addition to the steady-burning brake lamps required by the regulations, is likely to provide a level of safety that is equivalent to, or greater than, the level of safety achieved without the exemption.

Terms and Conditions for the Exemption

The Agency hereby grants the exemption for a 5-year period, beginning January 20, 2022 and ending January 20, 2027. During the temporary exemption period, Waste Management's operating companies will be allowed to replace the high-mounted brake lights on their owned and operated fleets of heavy-duty refuse and support trucks and will be allowed to install a red or amber brake-activated pulsating lamp in the upper center position or in an upper dual outboard position on the rear of their owned and operated fleets of heavy-duty refuse and support trucks in addition to the steady-burning brake lamps required by the FMCSRs.

The exemption will be valid for 5 years unless rescinded earlier by FMCSA. The exemption will be rescinded if: (1) Waste Management fails to comply with the terms and conditions of the exemption; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315(b).

Interested parties possessing information that would demonstrate that Waste Management's 106 operating companies' owned and operated fleets of heavy- duty refuse and support trucks with red or amber brake-activated pulsating lamps positioned in the upper center position, or in an upper dual outboard position, in addition to the steady

burning brake lamps required by the Federal Motor Carrier Safety Regulations (FMCSRs) is not achieving the requisite statutory level of safety should immediately notify FMCSA. The Agency will evaluate any such information and, if safety is being compromised or if the continuation of the exemption is not consistent with 49 U.S.C. 31136(e) and 31315(b), will take immediate steps to revoke the exemption.

Preemption

In accordance with 49 U.S.C. 31313(d), as implemented by 49 CFR 381.600, during the period this exemption is in effect, no State shall enforce any law or regulation applicable to interstate commerce that conflicts with or is inconsistent with this exemption. States may, but are not required to, adopt the same exemption with respect to operations in intrastate commerce.

Meera Joshi,
Deputy Administrator.

[FR Doc. 2022-01023 Filed: 1/19/2022 8:45 am; Publication Date: 1/20/2022]